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| 09/530,447 | 04/28/2000 | YOSHINORI KAMI | 01165.0782 | 6878 |

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FINNEGAN, HENDERSON, FARABOW, GARRETT &
DUNNER LLP
1300 I STREET, NW
WASHINGTON, DC 20005

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| EXAMINER |
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PATTERSON, MARC A

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| ART UNIT | PAPER NUMBER |
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1772

DATE MAILED: 07/02/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/530,447

Applicant(s)

KAMI ET AL.

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

DETAILED ACTION

WITHDRAWN REJECTIONS

1. The 35 U.S.C 112 second paragraph rejections of Claims 1 – 2 and 4 (now amended Claims 9 – 10 and 12), of record on page 2 of the previous Action, are withdrawn.

NEW REJECTIONS

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9 – 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase ‘the load at 15% tensile elongation in a range from 3 to 35 N%/2.54 cm, and the tensile work at break in a range from 7000 to 30,000 N/% / 2.54cm’ is indefinite, as the values of the two properties which are claimed will depend on the procedure which is used to measure the properties, and the test procedure has not been defined in the claims. For the same reason, the units ‘N/% / 2.54cm’ are also indefinite. For purposes of examination, the load at 15% tensile elongation and tensile work at break will be assumed to have any value. Correction and / or clarification is required.

4. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term ‘plain’ is apparently misspelled ‘plan.’

NEW REJECTIONS

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuki et al. (U.S. Patent No. 5,637,385) in view of Khandhadia et al. (U.S. Patent No. 5,584,507).

With regard to Claims 9, 11 – 12, and 15, Mizuki et al disclose an air bag (column 9, lines 19 – 37) formed of two woven fabrics interwoven with each other to be a bag - shaped body (the woven fabric is under a discontinuous state; column 5, lines 12 – 14); the fabric is composed of polyamide yarn (column 6, lines 33 – 46), and a coating is applied to the surface of the fabric (column 10, lines 9 – 14). The total fineness (denier) is 310, the weave density is 61 warp yarns per inch (column 18, lines 59 – 67), the fineness of a single fiber is 5 denier (column 12, lines 12 – 21), the drawing ratio is 4.0 to 6.0 (column 12, lines 6 – 11) and the tensile strength is 100 kg/3cm (column 9, lines 50 – 59). Mizuki fails to disclose a woven fabric containing copper compounds at 30 to 200 ppm, and a fabric wherein the product of fineness of warp or weft of the fabric multiplied by the weave density of the fabric is not more than 16,000 decitex ends / 2.54 cm, and the product of total fineness and weave density of weft is larger than the product of the total fineness and weave density of warp, and the birefringence of the weft is

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larger than that of the warp, and a single filament fineness in the range of 1 – 3 decitex, and a tensile strength in a range of 4.85 to 7.5 decitex.

Khandhadia et al teach the application of a coating comprising 200 milligrams of copper oxide to the fabric surface of an air bag (column 4, lines 4 – 15) for the purpose of reducing the level of carbon monoxide and nitrous oxide from the gas generant of the air bag (column 2, lines 52 – 67).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for the application of a coating comprising 200 milligrams of copper oxide to the fabric surface of Mizuki in order to reduce the level of carbon monoxide and nitrous oxide from the gas generant of the air bag as taught by Khandhadia et al. (the fabric of the bag would therefore contain copper compounds).

Khandhadia et al fail to disclose a copper concentration of 30 – 200 ppm. However, Khandhadia et al disclose a coating containing 200 milligrams of copper. Therefore, the amount of copper would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the amount of copper, since the amount of copper would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Khandhadia et al. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

It would also have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to vary the concentration of copper in the coating taught by Khandhadia et al., and the total fineness, fineness of a single fiber (which will determine the fineness of warp

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and fineness of weft, and therefore the product of these finenesses with the corresponding weave densities), weave density, tensile strength and drawing ratio (which will determine the selected birefringence of warp and weft; column 12, lines 4 – 11) disclosed by Mizuki et al., since these parameters would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end result. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

With regard to Claim 10, Mizuki et al. disclose a fabric which is sewn (woven) to have a three – dimensional contour (the construction is three dimensional; column 5, lines 4 – 23).

With regard to Claim 13, Mizuki et al. disclose a weave which is a plain weave (column 12, lines 56 – 66).

With regard to Claim 14, Mizuki et al. disclose an air bag which is of a circular shape (column 5, lines 4 – 9).

With regard to Claim 16, Mizuki et al. disclose an air bag which is for use by for driver's or passenger's seat (column 1, lines 62 – 67; column 2, lines 1 – 6).

ANSWERS TO APPLICANT'S ARGUMENTS

7. Applicant's arguments regarding the 35 U.S.C 112 second paragraph rejections of Claims 1 – 2 and 4 (now amended Claims 9 – 10 and 12), of record on page 2 of the previous Action, have been considered and have been found to be persuasive. The rejections are therefore withdrawn. Applicant's arguments regarding the 35 U.S.C. 103(a) rejection of Claims 1 – 8 (now amended Claims 9 – 16) as being unpatentable over Mizuki et al. (U.S. Patent No. 5,637,385) in view of Khandhadia et al. (U.S. Patent No. 5,584,507), of record on page 2 of the previous

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Action, have been considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 7 of Paper No. 8, that the rejection is improper because Mizuki et al fail to disclose a polyamide fiber yarn containing a copper compound having a concentration of 30 – 200 ppm. However, as stated on page 2 of the previous Action, Khandhadia et al teach the application of a coating comprising copper oxide to the fabric surface of an air bag (column 4, lines 4 – 15) for the purpose of reducing the level of carbon monoxide and nitrous oxide from the gas generant of the air bag (column 2, lines 52 – 67).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for the application of a coating comprising copper oxide to the fabric surface of Mizuki in order to reduce the level of carbon monoxide and nitrous oxide from the gas generant of the air bag as taught by Khandhadia et al. (the fabric of the bag would therefore contain copper compounds).

Khandhadia et al fail to disclose a copper concentration of 30 – 200 ppm. However, as stated on page 2 of the previous Action, Khandhadia et al disclose a coating containing 100 milligrams of copper. Therefore, the amount of copper would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the amount of copper, since the amount of copper would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Khandhadia et al. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

Applicant also argues, on page 7, that Mizuki et al fail to disclose a single filament fineness in the range of 1 – 3 decitex and a fabric wherein the product of fineness of warp or weft of the fabric multiplied by the weave density of the fabric is not more than 16,000 decitex ends / 2.54 cm. However, the fabric disclosed by Mizuki et al comprises a fineness of a single fiber of 5 denier (column 12, lines 12 – 21), and a weave density of 61 warp yarns per inch (column 18, lines 59 – 67). Therefore, the single fiber fineness and weave density (and therefore the product of the fineness and weave density) would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the single fiber fineness and weave density, since the single fiber fineness and weave density would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Mizuki et al *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

Applicant also argues on page 7 that Mizuki et al fail to disclose a load at 15% tensile elongation in a range from 3 to 35 N%/2.54 cm, and the tensile work at break in a range from 7000 to 30,000 N% / 2.54cm. However, the load at a specified tensile elongation and tensile work at break are dependent on the procedure which is used to measure these properties, and the load which is applied during the test procedure, and the test procedure has not been defined in the claims, although some indication of the procedure is made on page 13 of the specification. The 35 U.S.C 112 second paragraph rejection of Claims 9 – 16 is directed to amended Claims 9 – 16.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

Marc Patterson
Art Unit 1772

Harold Pyon
HAROLD PYON
SUPERVISORY PATENT EXAMINER
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6/28/02